

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. - 4. (canceled).

5. (currently amended): A chemical analysis system comprising:

a means for spotting a sample liquid onto a first chemical analysis element for measuring the concentration of a specific component contained in the sample liquid,

a means for spotting a sample liquid and a reference liquid onto a second chemical analysis element for measuring the activity of a specific ion contained in the sample liquid,

an incubator in which the first chemical analysis element spotted with the sample liquid and the second chemical analysis element spotted with the sample liquid and the reference liquid are placed and which holds the first and second chemical analysis elements at respective constant temperatures,

a concentration measuring means which is provided to measure the concentration of the specific component contained in the sample liquid by measuring the optical density of the color formed by the coloring reaction of the sample liquid and a reagent on the first chemical analysis element after incubation in the incubator,

an ionic activity measuring means which is provided to measure the ionic activity of the specific ion contained in the sample liquid after incubation in the incubator, and

a temperature control means for automatically maintaining the first chemical analysis element at a first predetermined temperature suitable for measuring the optical density of the color formed by the coloring reaction and holds the second chemical analysis element at a second predetermined temperatures suitable for measuring ionic activity;

wherein the first predetermined temperature and the second predetermined temperature are differentiated by making an amount of heat transmitted to the first chemical analysis element different from that transmitted to the second chemical analysis element, and

wherein the temperature control means comprises a heating means that cooperates with a first pressing member and a second pressing member.

6. (original): A chemical analysis system as defined in Claim 5 further provided with a chemical analysis element supply section which stores both the first and second chemical analysis elements, and a conveyor means for conveying the chemical analysis element in the chemical analysis element supply section to the incubator.

7. (canceled).

8. (original): A chemical analysis system as defined in Claim 5 further provided with a diluting unit which includes a sample liquid container and dilutes the sample liquid in the container with diluent.

9. (previously presented): A chemical analysis system, comprising:

a spotting mechanism operable to spot a sample liquid onto a first chemical analysis element for measuring the concentration of a specific component contained in the sample liquid, and operable to spot a sample liquid and a reference liquid onto a second chemical analysis element for measuring the activity of a specific ion contained in the sample liquid;

an incubator in which the first chemical analysis element spotted with the sample liquid and the second chemical analysis element spotted with the sample liquid and the reference liquid are placed and which holds the first and second chemical analysis elements at constant temperatures;

a concentration measuring device operable to measure the concentration of the specific component contained in the sample liquid by measuring the optical density of the color formed by the coloring reaction of the sample liquid and a reagent on the first chemical analysis element after incubation in the incubator;

an ionic activity measuring device operable to measure the ionic activity of the specific ion contained in the sample liquid after incubation in the incubator;

a temperature control device comprising a temperature control element and a first pressing member for the first chemical analysis element in the incubator and a second pressing member for the second chemical analysis element in the incubator, the temperature control device holds the first and second chemical analysis elements at predetermined temperatures; and

a detector comprising a bar code reader for detecting the position of the chemical analysis element in which the chemical analysis element is conveyed by reading a bar code provided on each chemical analysis element,

wherein the first predetermined temperature and the second predetermined temperature are differentiated by making an amount of heat transmitted to the first chemical analysis element different from that transmitted to the second chemical analysis element.

10. - 12. (canceled).

13. (previously presented): A chemical analysis system as defined in claim 5, further provided with a receiving portion located in the incubator which stores a single chemical analysis element.

14. (previously presented): A chemical analysis system as defined in claim 13, further provided with a plurality of the receiving portions, which are located in the incubator, each for storing a chemical analysis element wherein the incubator is capable of simultaneously maintaining different temperatures in the different receiving portions.

15. (previously presented): A chemical analysis system as defined in claim 13, wherein the incubator is capable of simultaneously maintaining different temperatures for the first chemical analysis element and for the second chemical analysis element.

16. (previously presented): A chemical analysis system comprising:

means for spotting a sample liquid onto a first chemical analysis element for measuring the concentration of a specific component contained in the sample liquid,

means for spotting a sample liquid and a reference liquid onto a second chemical analysis element for measuring the activity of a specific ion contained in the sample liquid,

an incubator capable of simultaneously maintaining two different temperatures for simultaneously holding the first chemical analysis element spotted with the sample liquid and the second chemical analysis element spotted with the sample liquid and the reference liquid,

a concentration measuring means which is provided to measure the concentration of the specific component contained in the sample liquid by measuring the optical density of the color formed by the coloring reaction of the sample liquid and a reagent on the first chemical analysis element after incubation in the incubator,

an ionic activity measuring means which is provided to measure the ionic activity of the specific ion contained in the sample liquid after incubation in the incubator, and

a temperature control means for holding the first chemical analysis element at a first predetermined temperature suitable for measuring the optical density of the color formed by the coloring reaction and holds the second chemical analysis element at a second predetermined temperature suitable for measuring the ionic activity,

wherein the temperature control means comprises one single heating means that cooperates with a first pressing member holding the first chemical analysis element in the

incubator and a different second pressing member holding the second chemical analysis element in the incubator.

17. (previously presented): A chemical analysis system as defined in claim 16, further provided with a receiving portion located in the incubator which stores a single chemical analysis element.

18. (previously presented): A chemical analysis system as defined in claim 17, further provided with a plurality of the receiving portions, which are located in the incubator, each for storing a chemical analysis element wherein the incubator is capable of simultaneously maintaining different temperatures in the different receiving portions.

19. (previously presented): A chemical analysis system as defined in claim 16, wherein the incubator is capable of simultaneously maintaining the temperature of about 37°C at the receiving portion for storing the first chemical analysis element and the temperature of 30 °C at the receiving portion for the second chemical analysis element.

20. (previously presented): A chemical analysis system as defined in claim 16, further provided with a detector comprising a bar code reader for detecting the position of the chemical analysis element in which the chemical analysis element is conveyed by reading a bar code provided on the back of each chemical analysis element.

21-23 (canceled).

24. (previously presented): A chemical analysis system as defined in claim 9, wherein the first pressing member only holding the first chemical analysis element in the incubator is different in shape from the second pressing member only holding the second chemical analysis element in the incubator.

25-34. (canceled).

35. (previously presented): The chemical analysis system according to claim 5, wherein the temperature control means maintains, without any involvement from a user, the first chemical analysis element at the first predetermined temperature suitable for measuring the optical density of the color formed by the coloring reaction and the second chemical analysis element at the second predetermined temperature suitable for measuring ionic activity.

36. (previously presented): The chemical analysis system according to claim 5, wherein the temperature control means maintains, without any involvement from a user, the first chemical analysis element at the first predetermined temperature suitable for measuring the optical density of the color formed by the coloring reaction and the second chemical analysis

element at the second predetermined temperature suitable for measuring ionic activity, based on a position of the first and second chemical analysis elements.

37. (previously presented): The chemical analysis system according to claim 14, wherein the temperature control means maintains, without any involvement from a user, the first chemical analysis element at the first predetermined temperature suitable for measuring the optical density of the color formed by the coloring reaction and the second chemical analysis element at the second predetermined temperature suitable for measuring ionic activity, based on in which receiving portion from said different receiving portions the first and second chemical analysis elements are placed.

38. (previously presented): The chemical analysis system according to claim 37, wherein the different receiving portions have different pressure members and wherein the first chemical analysis element is positioned in a receiving portion with a first pressure member and the second chemical analysis element is positioned in a receiving portion with a second pressure member, and wherein the temperature control means cooperates with the first and second pressing members maintaining the first chemical analysis element at a temperature different from the second chemical analysis element.

39. (currently amended): ~~The chemical analysis system according to claim 5~~ A chemical analysis system comprising:

a means for spotting a sample liquid onto a first chemical analysis element for measuring the concentration of a specific component contained in the sample liquid.

a means for spotting a sample liquid and a reference liquid onto a second chemical analysis element for measuring the activity of a specific ion contained in the sample liquid.

an incubator in which the first chemical analysis element spotted with the sample liquid and the second chemical analysis element spotted with the sample liquid and the reference liquid are placed and which holds the first and second chemical analysis elements at respective constant temperatures.

a concentration measuring means which is provided to measure the concentration of the specific component contained in the sample liquid by measuring the optical density of the color formed by the coloring reaction of the sample liquid and a reagent on the first chemical analysis element after incubation in the incubator.

an ionic activity measuring means which is provided to measure the ionic activity of the specific ion contained in the sample liquid after incubation in the incubator, and

a temperature control means for automatically maintaining the first chemical analysis element at a first predetermined temperature suitable for measuring the optical density of the color formed by the coloring reaction and holds the second chemical analysis element at a second predetermined temperatures suitable for measuring ionic activity.

wherein the first chemical analysis element has a barcode and the second chemical analysis element has a barcode and further comprising a barcode reader reading, for each of the first and second chemical analysis elements, the barcode and detecting type of a respective

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element, wherein the temperature control means automatically determines a suitable temperature, selected from the first predetermined temperature and the second predetermined temperature, for the respective element based on the type of the respective element detected by the barcode reader.